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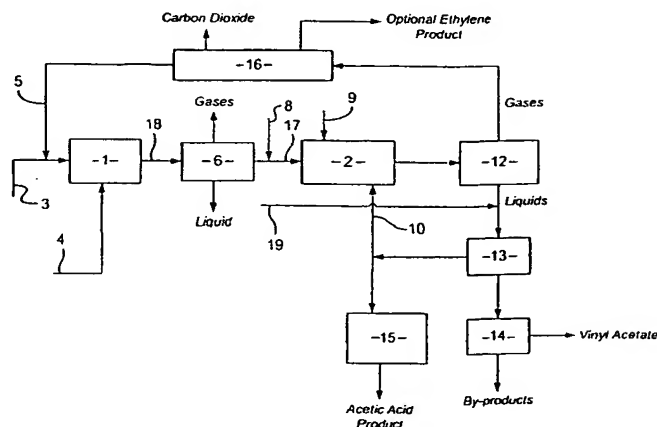
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(57) Abstract: An integrated process for the production of an alkenyl carboxylate, such as vinyl acetate which process comprises the steps of (a) contacting in an oxidation reaction zone a C₂ to C₄ alkane, such as ethane, a molecular oxygen-containing gas, optionally the corresponding alkene and optionally water, in the presence of a catalyst to produce a stream comprising alkene, carboxylic acid and water; (b) separating at least a portion of the stream from step (a) into a fraction comprising the alkene and a fraction comprising the carboxylic acid and water; (c) contacting in a second reaction zone at least a portion of said alkene fraction produced in step (b), a carboxylic acid and a molecular oxygen-containing gas, in the presence of a catalyst to produce a product stream comprising an alkenyl carboxylate, water and carboxylic acid; (d) separating at least a portion of the product stream from step (c) and at least a portion of the carboxylic acid and water fraction produced in step (b) by azeotropic distillation into an overhead fraction comprising the alkenyl carboxylate and a base fraction comprising the carboxylic acid; (e) recovering the alkenyl carboxylate from the overhead fraction separated in step (d).